

IN THE CLAIMS

Please cancel claims 21 through 83 and add the following new claims 84 through 149. The new claims add no new subject matter and are fully supported by the application, including the specification, figures, and claims as originally filed. Thus, claims 84 through 149 (66 total claims) are pending upon entry of this amendment.

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-83 (canceled)

Claim 84 (new): A recombinant cell, comprising:

a first nucleic acid molecule comprising:

a promoter or enhancer operable for a nucleic acid molecule encoding a protein involved in drug metabolism, and

a reporter gene,

wherein said promoter or enhancer is operably linked to said reporter gene;

further wherein said promoter or enhancer is native to said protein involved in drug metabolism, wherein said protein involved in drug metabolism is a protein selected from the group consisting of P450 proteins, glucuronosyl transferases, N-acetyltransferases, p-glycoproteins, glutathione transferases, sulfo transferases, and MDR1; and

a second nucleic acid encoding an intracellular receptor or transcription factor,

wherein when said intracellular receptor or transcription factor is bound with, associated with or activated by a compound that induces the expression of said protein involved in drug metabolism, said intracellular receptor or transcription factor can operably bind with, associate with or activate said promoter or enhancer resulting in the expression of said reporter gene;

wherein said first nucleic acid molecule, said second nucleic acid molecule, or both are stably transfected into said recombinant cell;

wherein said recombinant cell is an isolated cell or a cultured cell; and

wherein when said cell is contacted with said compound, said reporter gene is expressed.

Claim 85 (new): The recombinant cell of claim 84, wherein said protein involved in drug metabolism is a P450.

Claim 86 (new): The recombinant cell of claim 84, wherein said protein involved in drug metabolism is a glucuronosyl transferase.

Claim 87 (new): The recombinant cell of claim 84, wherein said protein involved in drug metabolism is a N-acetyltransferase.

Claim 88 (new): The recombinant cell of claim 84, wherein said protein involved in drug metabolism is a p-glycoprotein.

Claim 89 (new): The recombinant cell of claim 84, wherein said protein involved in drug metabolism is a glutathione transferase.

Claim 90 (new): The recombinant cell of claim 84, wherein said protein involved in drug metabolism is a sulfo transferase.

Claim 91 (new): The recombinant cell of Claim 84, wherein said protein involved in drug metabolism is MDR1.

Claim 92 (new): The recombinant cell of claim 84, wherein said reporter gene encodes an enzyme.

Claim 93 (new): The recombinant cell of claim 84, wherein said reporter gene encodes a detectable protein.

Claim 94 (new): The recombinant cell of claim 84, wherein said first nucleic acid molecule is present in an extrachromosomal element.

Claim 95 (new): The recombinant cell of claim 84, wherein said first nucleic acid molecule is within the chromosome of said cell.

Claim 96 (new): The recombinant cell of claim 84, wherein said reporter gene is inserted into the chromosome of said cell.

Claim 97 (new): The recombinant cell of claim 84, wherein said enhancer or promoter is endogenous to the chromosome of said cell.

Claim 98 (new): The recombinant cell of claim 84, wherein said reporter gene is endogenous to the chromosome of said cell.

Claim 99 (new): The recombinant cell of claim 84, wherein said intracellular receptor or transcription factor forms a complex with or is indirectly activated by a drug and directly or indirectly produces transcriptional activation of said nucleic acid molecule encoding a protein involved in drug metabolism, wherein said protein involved in drug metabolism is a protein selected from the group consisting of P450 proteins, glucuronosyl transferases, N-acetyltransferases, p-glycoproteins, glutathione transferases, sulfo transferases, and MDR1.

Claim 100 (new): The recombinant cell of claim 84, wherein said intracellular receptor or transcription factor forms a complex with or is indirectly activated by a chemical and directly or indirectly produces transcriptional activation of said nucleic acid molecule encoding a protein involved in drug metabolism, wherein said protein involved in drug metabolism is a protein selected from the group consisting of P450 proteins, glucuronosyl transferases, N-acetyltransferases, p-glycoproteins, glutathione transferases, sulfo transferases, and MDR1.

Claim 101 (new): The recombinant cell of claim 84, wherein said intracellular receptor or transcription factor forms a complex with or is indirectly activated by a metabolite and directly or indirectly produces transcriptional activation of said nucleic acid molecule encoding a protein involved in drug metabolism, wherein said protein involved in drug metabolism is a protein selected from the group consisting of P450 proteins, glucuronosyl transferases, N-acetyltransferases, p-glycoproteins, glutathione transferases, sulfo transferases, and MDR1.

Claim 102 (new): The recombinant cell of claim 84, wherein said intracellular receptor or transcription factor is an orphan receptor.

Claim 103 (new): The recombinant cell of claim 84, wherein said intracellular receptor or transcription factor is a hormone receptor.

Claim 104 (new): The recombinant cell of claim 84, wherein said second nucleic acid molecule is present in an extrachromosomal element.

Claim 105 (new): The recombinant cell of claim 84, wherein said second nucleic acid molecule is present within the chromosome of said cell.

Claim 106 (new): The recombinant cell of claim 84, wherein said second nucleic acid molecule is endogenous to the chromosome of said cell.

Claim 107 (new): The recombinant cell of claim 84, wherein said cell is a mammalian cell.

Claim 108 (new): The recombinant cell of claim 84, wherein said cell is an isolated cell.

Claim 109 (new): The recombinant cell of claim 84, wherein said cell is a cultured cell.

Claim 110 (new): The recombinant cell of claim 84, wherein said cell is a human cell.

Claim 111 (new): The recombinant cell of claim 84, wherein said cell is a cell line.

Claim 112 (new): The recombinant cell of claim 84, wherein said cell is from liver tissue.

Claim 113 (new): The recombinant cell of claim 84, wherein said cell is from gastrointestinal tract tissue.

Claim 114 (new): The recombinant cell of claim 84, wherein said cell is from lung tissue.

Claim 115 (new): The recombinant cell of claim 84, wherein said cell is from kidney tissue.

Claim 116 (new): A method for evaluating compounds for the property of inducing the expression of a gene encoding a protein involved in drug metabolism, comprising;
providing a test compound;

contacting a test compound with a recombinant cell comprising:

a first nucleic acid molecule comprising:

a promoter or enhancer operable for a nucleic acid molecule
encoding a protein involved in drug metabolism, and
a reporter gene,

wherein said promoter or enhancer is operably linked to said
reporter gene,

further wherein said promoter or enhancer is native to said protein
involved in drug metabolism, wherein said protein involved in
drug metabolism is a protein selected from the group consisting of
P450 proteins, glucuronosyl transferases, N-acetyltransferases, p-
glycoproteins, glutathione transferases, sulfo transferases, and
MDR1, and

a second nucleic acid encoding an intracellular receptor or transcription factor,
wherein when said intracellular receptor or transcription factor is
bound with, associated with or activated by a compound that
induces the expression of said protein involved in drug
metabolism, said intracellular receptor or transcription factor can
operably bind with, associate with or activate said promoter or
enhancer resulting in the expression of said reporter gene;

wherein said recombinant cell is an isolated cell or a cultured cell;

wherein when said recombinant cell is contacted with said test compound, said
reporter
gene is expressed; and

detecting the expression of said reporter gene;

wherein expression of said reporter gene is indicative that said test compound altered the expression of a gene encoding a protein involved in drug metabolism.

Claim 117 (new): The method of claim 116, wherein said first nucleic acid molecule, said second nucleic acid molecule, or both are stably transfected into said recombinant cell.

Claim 118 (new): The method of claim 116, wherein said method is a high throughput method.

Claim 119 (new): The method of claim 116, wherein said protein involved in drug metabolism is a P450.

Claim 120 (new): The method of claim 116, wherein said protein involved in drug metabolism is a glucuronosyl transferase.

Claim 121 (new): The method of claim 116, wherein said protein involved in drug metabolism is a N-acetyltransferase.

Claim 122 (new): The method of claim 116, wherein said protein involved in drug metabolism is a p-glycoprotein.

Claim 123 (new): The method of claim 116, wherein said protein involved in drug metabolism is a glutathione transferase.

Claim 124 (new): The method of claim 116, wherein said protein involved in drug metabolism is MDR1.

Claim 125 (new): The method of claim 116, wherein said protein involved in drug metabolism is a sulfo transferase.

Claim 126 (new): The method of claim 116, wherein said reporter gene encodes an enzyme.

Claim 127 (new): The method of claim 116, wherein said reporter gene encodes a detectable protein.

Claim 128 (new): The method of claim 116, wherein said first nucleic acid molecule is present in an extrachromosomal element.

Claim 129 (new): The method of claim 116, wherein said first nucleic acid molecule is within the chromosome of said cell.

Claim 130 (new): The method of claim 116, wherein said reporter gene is inserted into the chromosome of said cell.

Claim 131 (new): The method of claim 116, wherein said enhancer or promoter is endogenous to the chromosome of said cell.

Claim 132 (new): The method of claim 116, wherein said reporter gene is endogenous to the chromosome of said cell.

Claim 133 (new): The method of claim 116, wherein said intracellular receptor or transcription factor forms a complex with or is indirectly activated by a drug and directly or indirectly produces transcriptional activation of a gene encoding a protein involved in drug metabolism, wherein said protein involved in drug metabolism is a protein selected from the group consisting of P450 proteins, glucuronosyl transferases, N-acetyltransferases, p-glycoproteins, glutathione transferases, sulfo transferases, and MDR1.

Claim 134 (new): The method of claim 116, wherein said intracellular receptor or transcription factor forms a complex with or is indirectly activated by a chemical and directly or indirectly produces transcriptional activation of a gene encoding a protein involved in drug metabolism, wherein said protein involved in drug metabolism is a protein selected from the group consisting of P450 proteins, glucuronosyl transferases, N-acetyltransferases, p-glycoproteins, glutathione transferases, sulfo transferases, and MDR1.

Claim 135 (new): The method of claim 116, wherein said intracellular receptor or transcription factor forms a complex with or is indirectly activated by a metabolite and directly or indirectly produces transcriptional activation of a gene encoding a protein involved in drug metabolism, wherein said protein involved in drug metabolism is a protein selected from the group consisting of P450 proteins, glucuronosyl transferases, N-acetyltransferases, p-glycoproteins, glutathione transferases, sulfo transferases, and MDR1.

Claim 136 (new): The method of claim 116, wherein said intracellular receptor or transcription factor is an orphan receptor.

Claim 137 (new): The method of claim 116, wherein said intracellular receptor or transcription factor is a hormone receptor.

Claim 138 (new): The method of claim 116, wherein said second nucleic acid molecule is present in an extrachromosomal element.

Claim 139 (new): The method of claim 116, wherein said second nucleic acid molecule is present within the chromosome of said recombinant cell.

Claim 140 (new): The method of claim 116, wherein said second nucleic acid molecule is endogenous to the chromosome of said recombinant cell.

Claim 141 (new): The method of claim 116, wherein said recombinant cell is a mammalian cell.

Claim 142 (new): The method of claim 116, wherein said recombinant cell is an isolated cell.

Claim 143 (new): The method of claim 116, wherein said recombinant cell is a cultured cell.

Claim 144 (new): The method of claim 116, wherein said recombinant cell is a human cell.

Claim 145 (new): The method of claim 116, wherein said recombinant cell is a cell line.

Claim 146 (new): The method of claim 116, wherein said recombinant cell is from liver tissue.

Claim 147 (new): The cell of claim 116, wherein said recombinant cell is from gastrointestinal tract tissue.

Claim 148 (new): The cell of claim 116, wherein said recombinant cell is from lung tissue.

Claim 149 (new): The cell of claim 116, wherein said recombinant cell is from kidney tissue.